Safari and WebKit Overview

Session 201

These are confidential sessions—please refrain from streaming, blogging, or taking pictures.

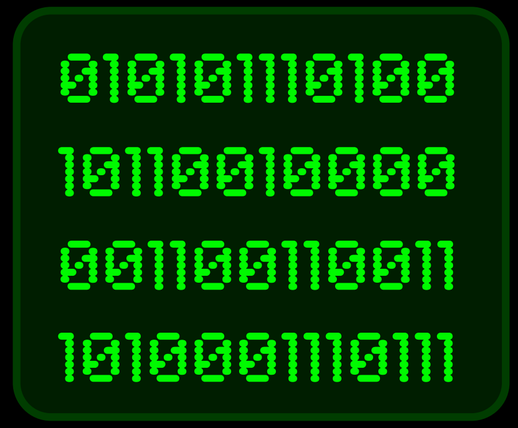
Safari and WebKit Overview

Darin Adler
Director, Safari and WebKit Engineering

What We'll Talk About

Safari and WebKit

Getting Involved

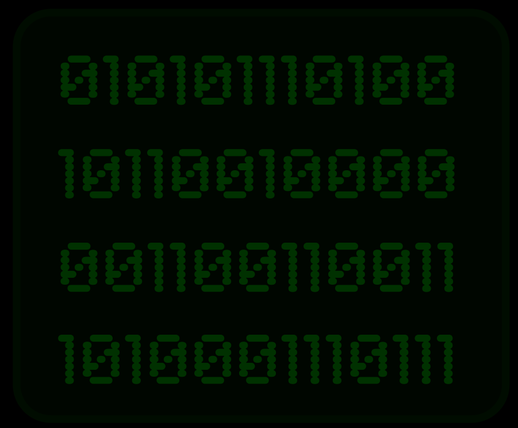


New Technology

What We'll Talk About

Safari and WebKit

Getting Involved



New Technology

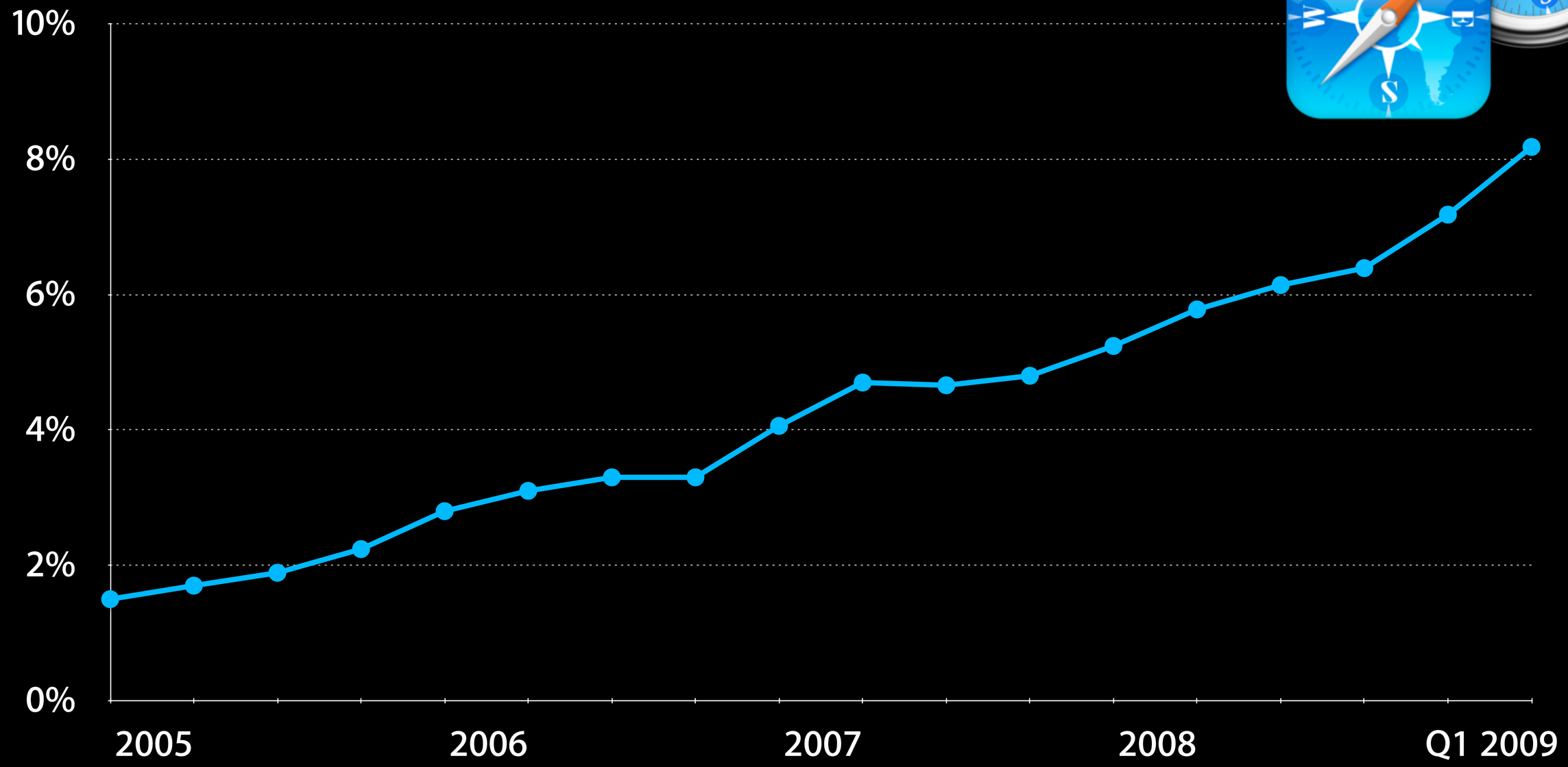
Safari

Safari

Safari

Safari Market Share

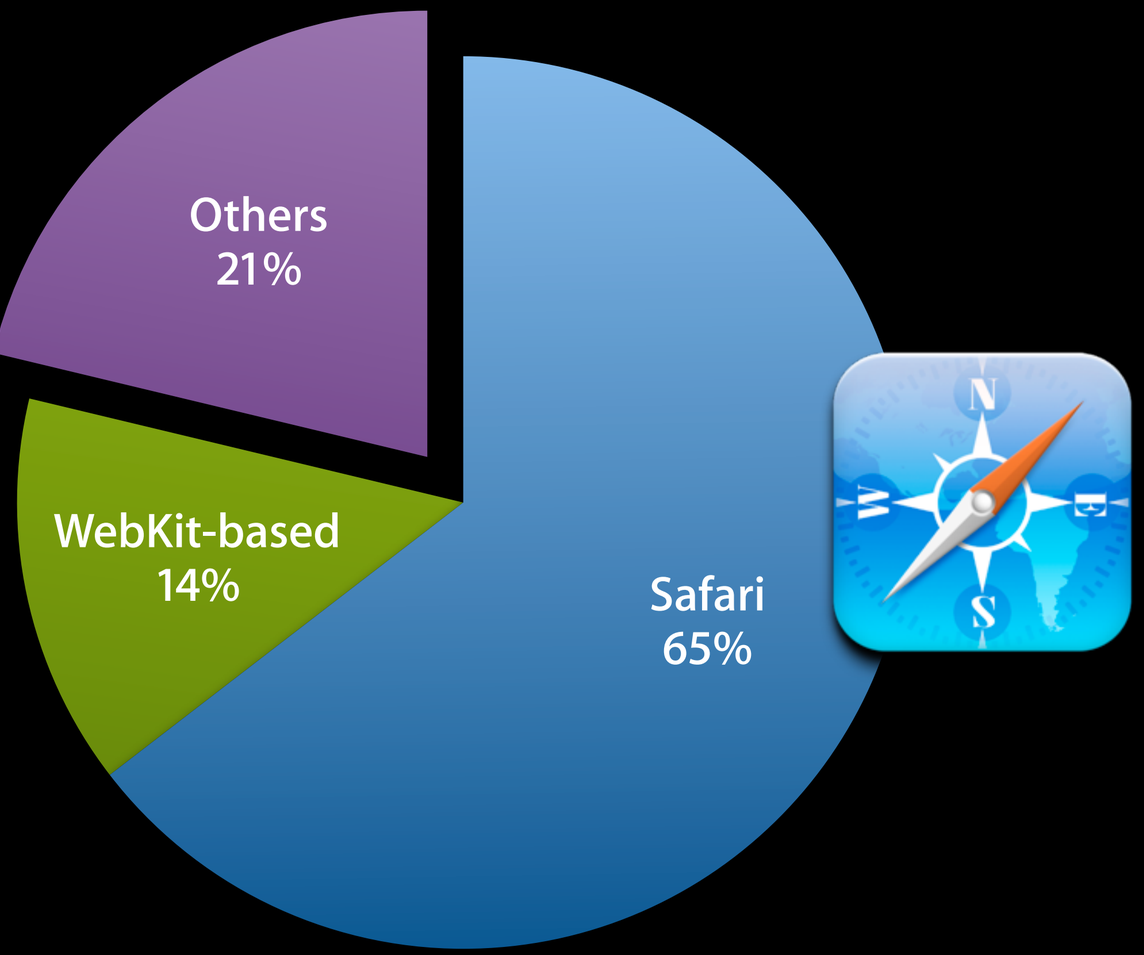
Still growing



Market share by net applications—marketshare.hitslink.com

Mobile Browser Market Share

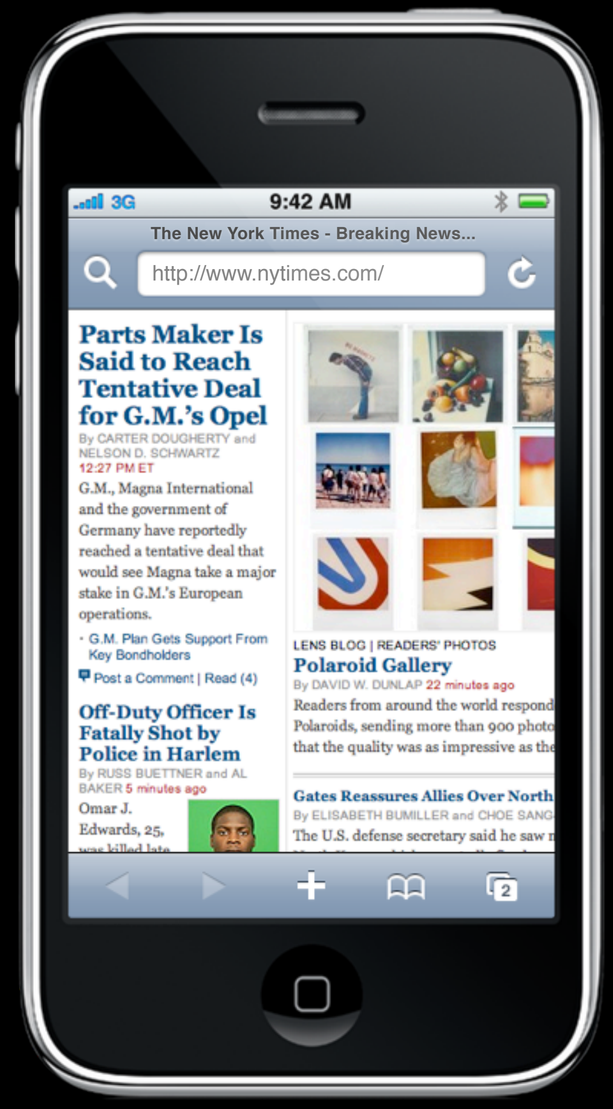
Safari is number one



Market share by net applications—marketshare.hitslink.com

The Latest Safari

Safari 4 and iPhone 3



Focusing on WebKit

WebKit Is an Industry Standard

“WebKit erodes the boundaries between the desktop, mobile phones, and the Web.”

Lars Knoll
KHTML founder

Over 100 Applications

Cocoa WebKit Sessions

Displaying Web Content in iPhone Applications	Marina Wednesday 9:00AM
Leveraging Web Content in Mac OS X Applications with WebKit	Mission Thursday 9:00AM

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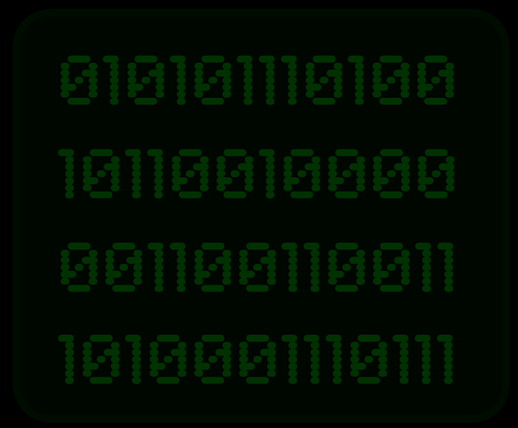

New Technology

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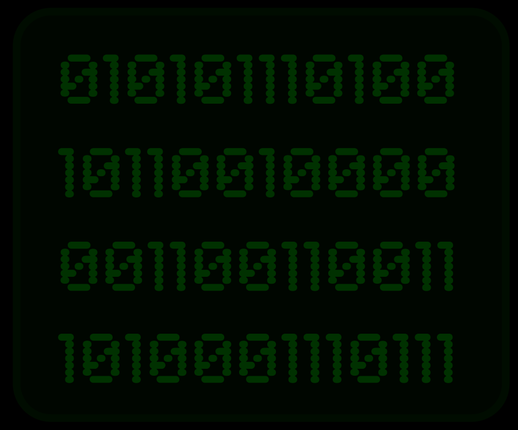


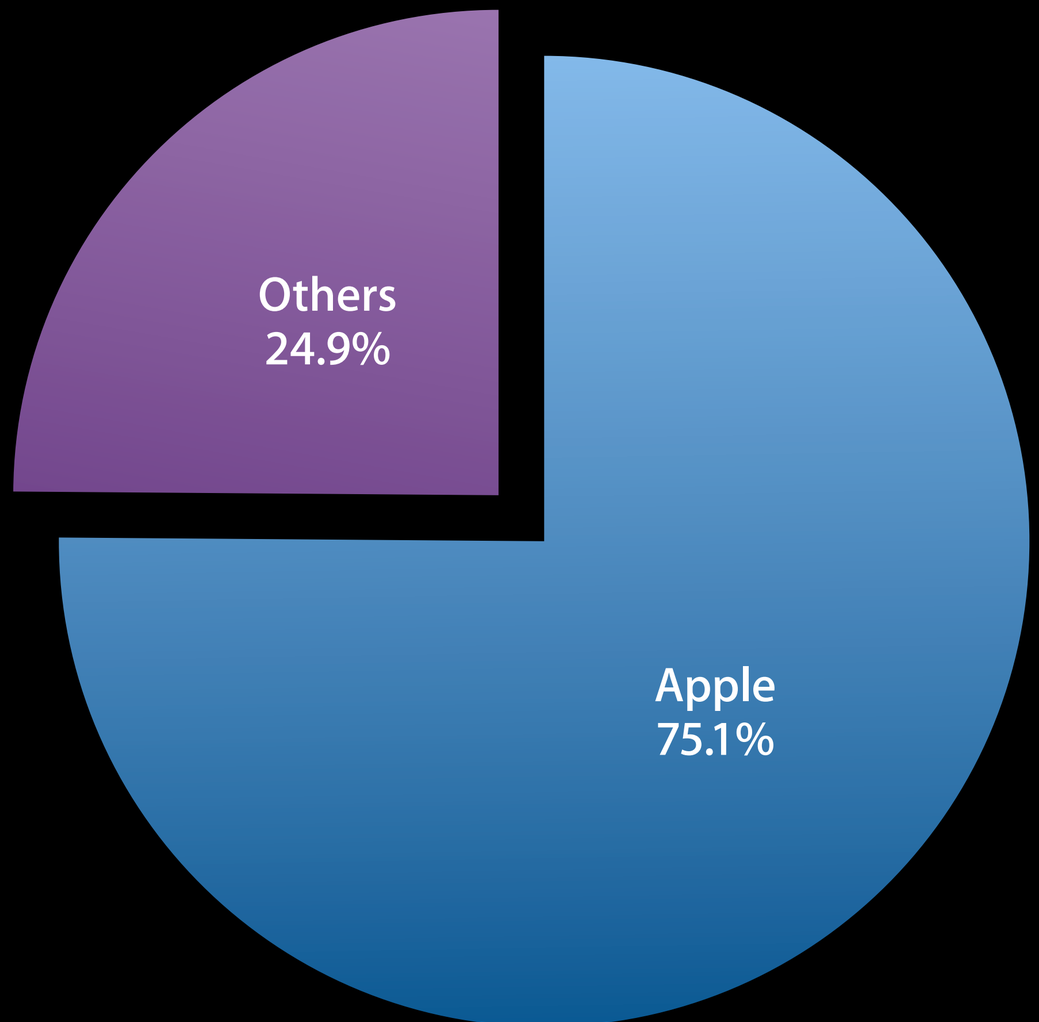
New Technology

Come in
IT'S
OPEN

540+

people contributed since 2005

Contribution Breakdown



Community Resources

WebKit Open Development

Public Source Repository	svn.webkit.org
Public Bug Database	bugs.webkit.org
Downloadable Nightly Builds	nightly.webkit.org
Website and Blog	webkit.org
Mailing Lists	lists.webkit.org
IRC Channel	#webkit irc.freenode.net

Bug Visibility

- Two-way communication on bugs
- See progress on bugs
- Test the fix as soon as it is checked in

Feature Visibility

- See new features discussed on the blog
- Provide feedback to help shape the future
- Help polish features and proposals for standardization

Deeper Involvement

Test!

Report Bugs!

Submit Patches!

How to Test

Step by step

1. Download a nightly build

2. Browse your favorite sites

“My main web browser is the nightly build of WebKit.”

John Gruber
Daring Fireball

When Good Websites Go Bad

Example from Safari 4 beta development

Writing a Good Bug Report

Step by step

1. Describe a single problem

2. Include URL or test case

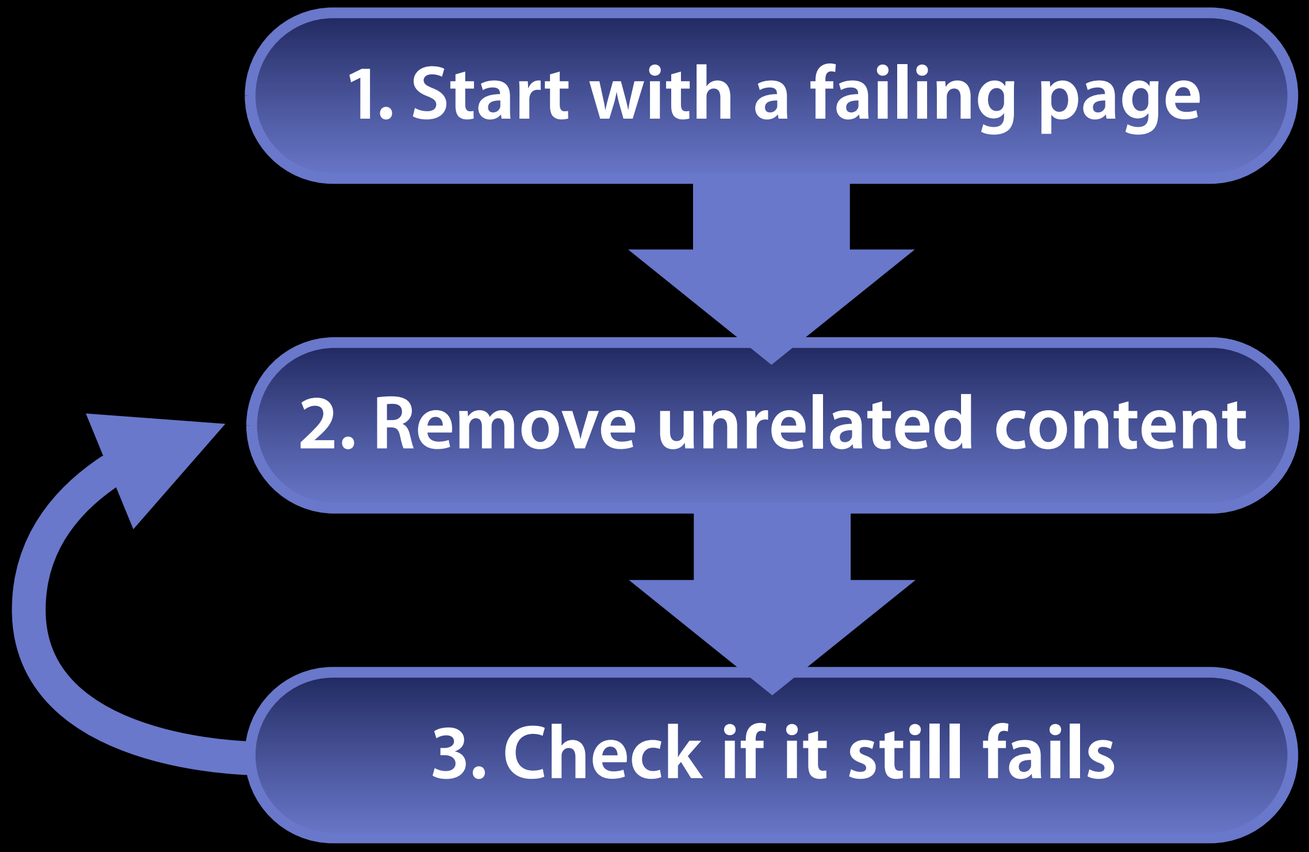
3. Provide clear steps

4. Explain what went wrong

```
<!doctype HTML>
<html>
<head>
     <title>Javelin</title>
     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
     <meta http-equiv="imagetoolbar" content="no">
     <meta name="viewport" content="width=820" />
     <link href="http://l.yimg.com/javelin.example.com/css/javelin.css.v54290.14" rel="stylesheet" type="text/css">
     <link rel="alternate"    type="application/atom+xml" title="Javelin Atom feed" href="http://api.javelin.com/services/feeds/groups_discuss.gne?
id=34427469792@N01&amp;lang=en-us&amp;format=atom">
     <link rel="alternate"    type="application/rss+xml" title="Javelin R feed" href="http://api.javelin.com/services/feeds/groups_discuss.gne?
id=34427469792@N01&amp;lang=en-us&amp;format=rss_200">

     <link rel="shortcut icon" type="image/ico" href="/favicon.ico">
<link href="http://l.yimg.com/www.javelin.com/css/c_group.css.v54100.14" rel="stylesheet" type="text/css">
<link href="http://l.yimg.com/www.javelin.com/css/c_discuss.css.v47258.14" rel="stylesheet" type="text/css">

<!--[if LT IE 7]>
<style type="text/css">
.trans_png {
     behavior: url('/javascript/pngbehavior2.htc');
     border:0;
}
</style>
<![endif]-->

          <link href="http://l.yimg.com/www.javelin.com/css/intl/c_en-us.css.v33225.14" rel="stylesheet" type="text/css">

<script type="text/javascript">
var global_magisterLudi = 'c78fc026783ee773c8e1ce47[illegible]6ab',
global_auth_hash = 'f504a12faf20cc8bc9917f71bfe6aa31',
global_auth_token = '',
global_javelin_secret = '0b7b025098fb2893',
global_slideShowVersion = '6708',
global_slideShowCodeVersion = '34351',
global_slideShowVersionV2 = '33427',
global_slideShowCodeVersionV2 = '49745',
global_slideShowTextVersion = '48841',
global_slideShowVersionV3 = '54120',
global_nsid = '',
global_ispro = 0,
global_dbid = '',
global_name ='',
global_expire ='',
global_icon_url ='http://l.yimg.com/www.javelin.com/images/buddyicon.jpg#',
global_tag_limit = '75',
global_collection_depth_limit = 5,
global_stewartVersion = '49235',
global_contact_limit = '3000',
global_eighteen = 1
```

Creating a Reduced Test Case

Step by step



Bug
Reduced

```
<table height="100%">
<tr>
    <td>
        <div></div>
        <iframe src="about:blank" height="100%"></iframe>
    </td>
</tr>
</table>
```

What's Where in WebKit Code

Contributors need to know this

WebKit

Public API
Platform Glue

WebCore

HTML, CSS, DOM
SVG, XML
Loading
Platform Glue
Rendering

JavaScriptCore

Nitro Engine, JIT, VM, and Runtime
Data Structures

Contributing Code

- Regression tests
- Coding style
- Code review
- Details on webkit.org

Reasons to Contribute

- Fix a pet bug
- Add a pet feature
- Port to a new platform

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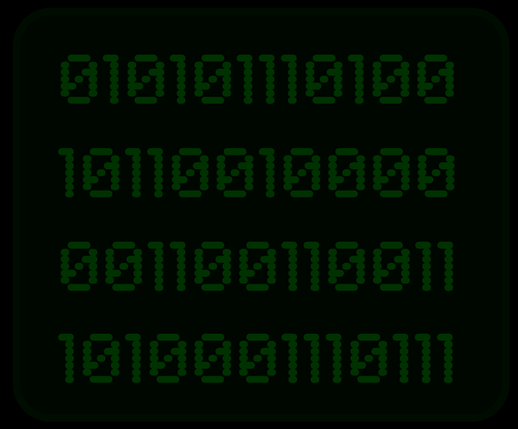

New Technology

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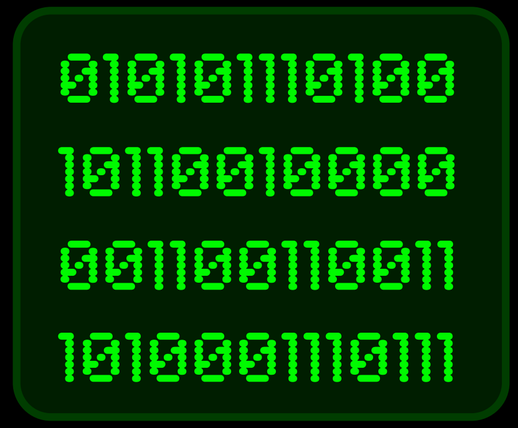
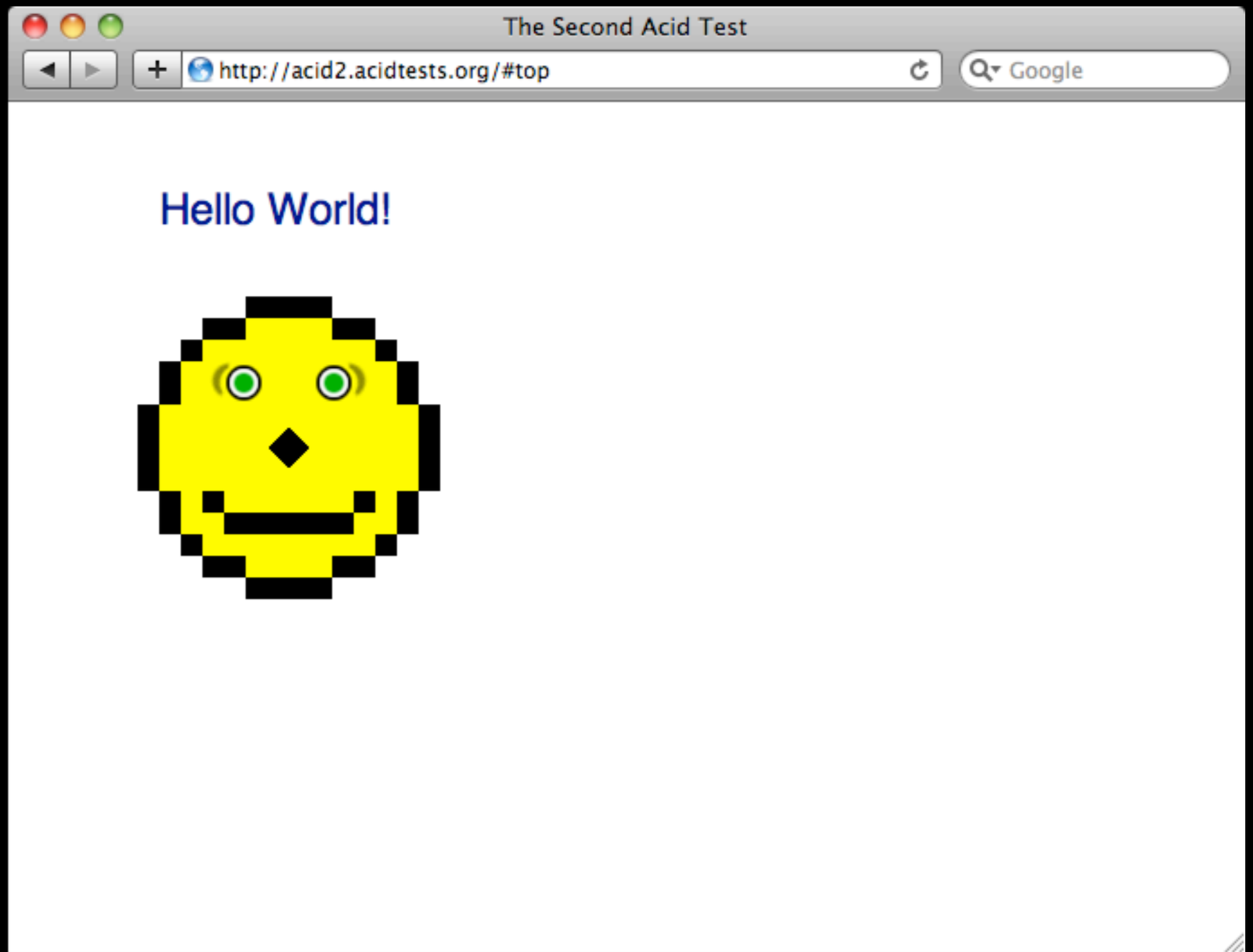


New Technology

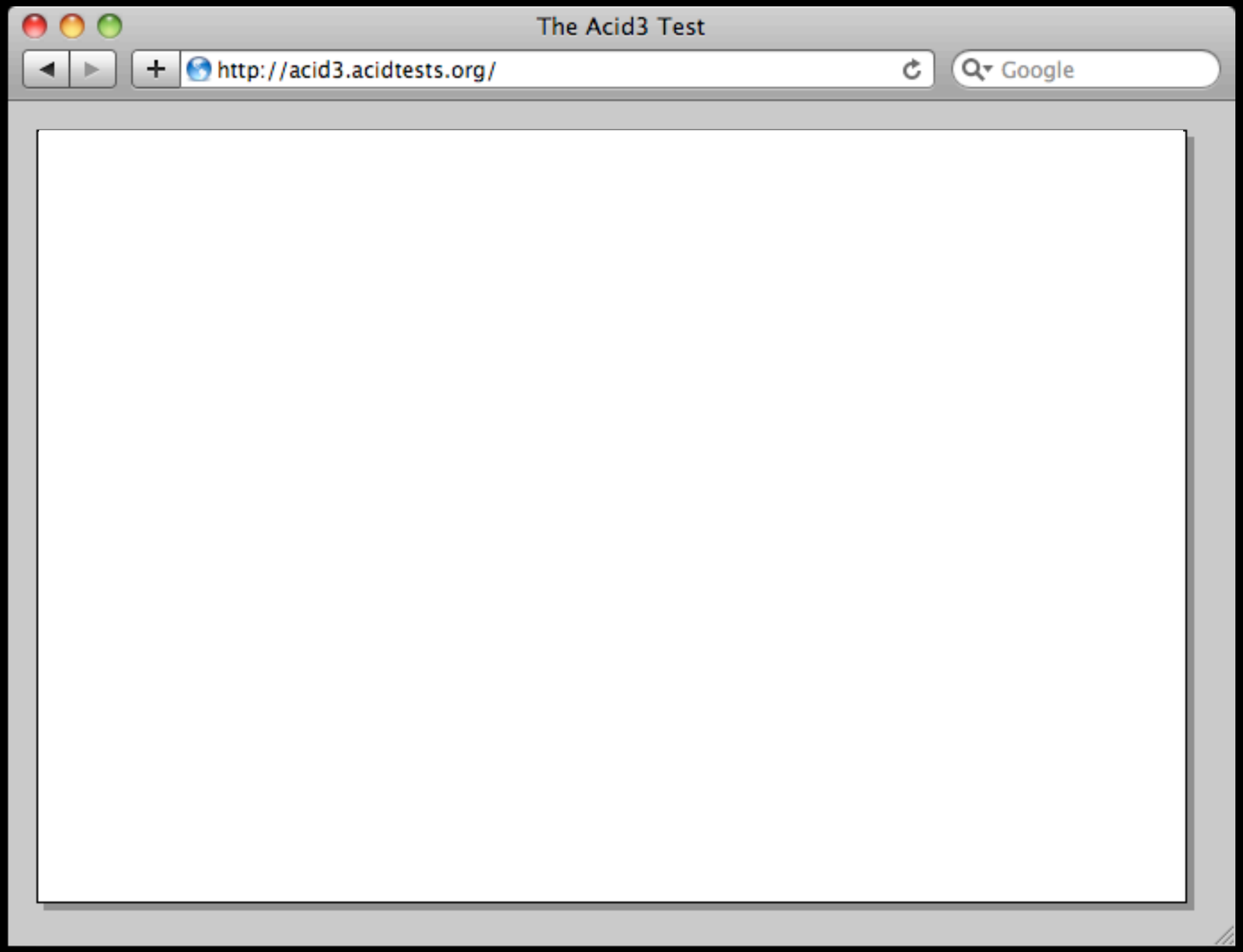
Standards

How we innovate

Acid 2

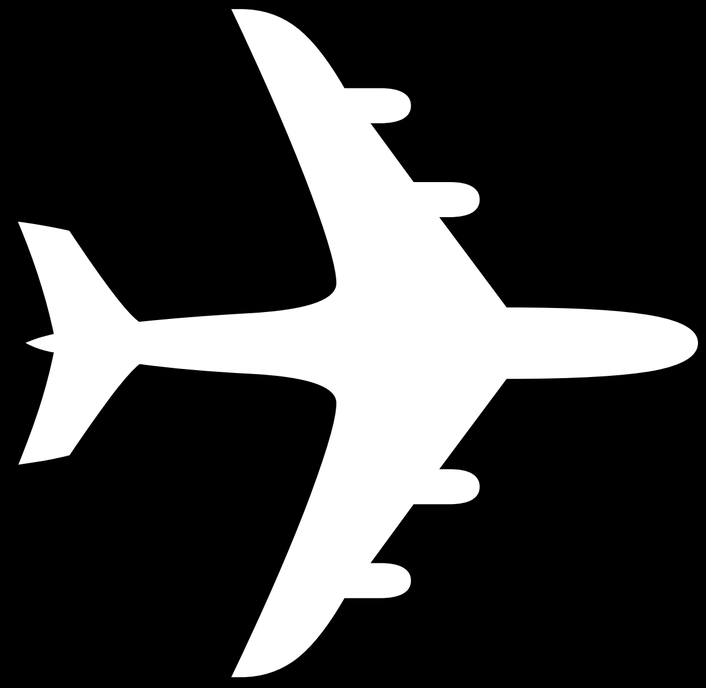

The Second Acid Test
http://acid2.acidtests.org/#top
Google
Hello World!

Acid 3



HTML 5

Offline Applications



Demo

Vicki Murley
Safari Technologies Evangelist

Related Sessions

Local Data Storage and Offline Web Applications for Safari	Russian Hill Thursday 3:30PM
Rapid Development with Safari's Integrated Developer Tools	Nob Hill Wednesday 2:00PM

Nitro Engine

JavaScript nearly 20× faster

Demo

Vicki Murley
Safari Technologies Evangelist

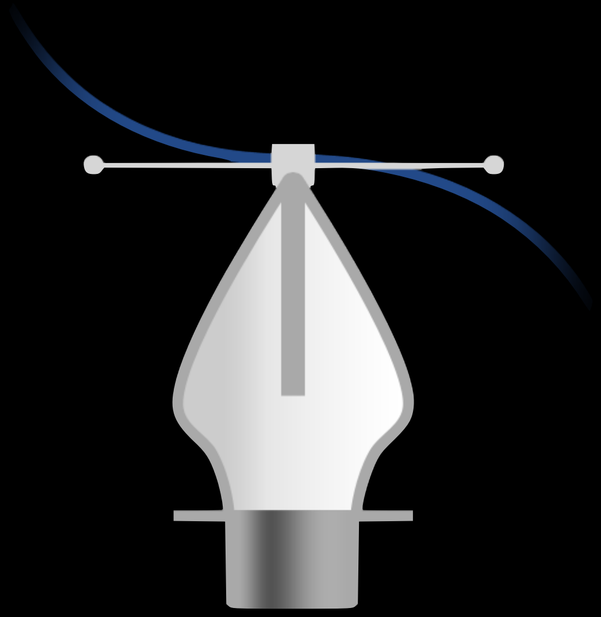
HTML 5 Media Elements

<audio>

<video>

Scalable Graphics

Web Fonts



SVG

CSS Effects

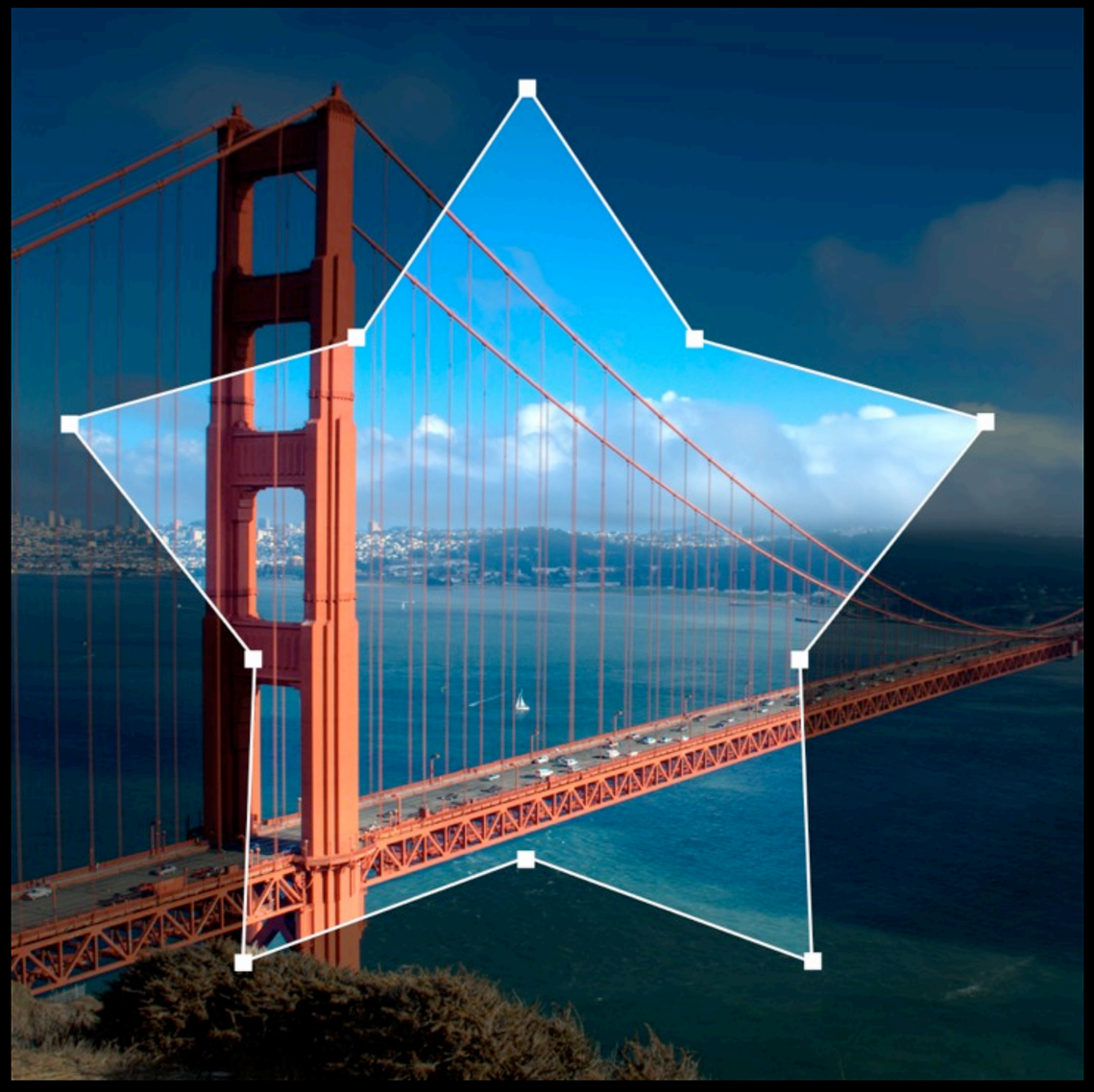
Masks

Gradients

Reflections

Animations

Masks



Animations

CSS Effects

Masks

Gradients

Reflections

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Animations

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Reflections

Animations

Demo

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Safari Technologies Evangelist

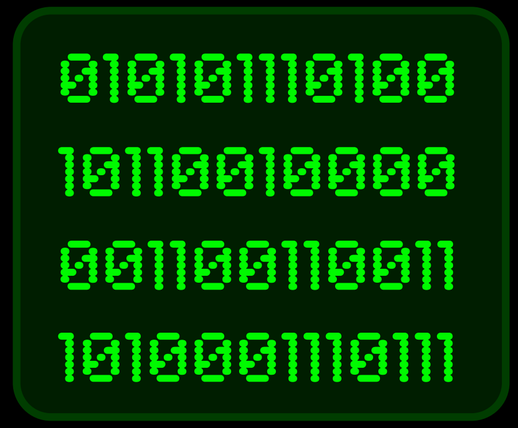
Related Sessions

Adding Innovative Styling and Animation with CSS Effects	Mission Tuesday 3:30PM
iPhone Web Applications from Start to Finish	Russian Hill Tuesday 2:00PM
Sophisticated Media Playback and Animation: Open Web Standards	Mission Wednesday 3:30PM

Recap

Safari and WebKit

Getting Involved



New Technology

Other Web Sessions

Building Compatible Websites Using Emerging Web Technologies	Russian Hill Thursday 5:00PM
Improving Accessibility in Web Applications	Russian Hill Friday 9:00AM

More Information

Vicki Murley
Safari Technology Evangelist
vmurley@apple.com

Documentation
Safari Dev Center
http://developer.apple.com/safari

Q&A

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Survey forms are located on each session description page at:

developer.apple.com/wwdc/attendee

WWDC09